4.8: Beyond Output Profiling: Display, Input, and Device Link Profiles

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**ICC profiles:** display and input.

### Display Profiling

Monitor profiling, but the more accurate designation is *display profiling* to acknowledge the inclusion of components beyond the monitor such as the video card and video drivers. Though less commonly profiled, this class of profile encompasses digital projectors as well.

The recommended settings to enter for the set-up phase are:

- White point: D65 (6500 K)
- Gamma: 2.2
**Input Profiles**

- White and black point setting
- Removing colour casts
- Sharpening
- Mount straight
- Mask open bed areas
- Scan as high-bit tiff
- Open in Photoshop (beware of any automated conversions or profile assignments) to rotate, crop, and spot
- Light evenly
- Capture square
- Open in Photoshop (beware of any automated conversions or profile assignments) to rotate, crop, and spot

**Device Link Profiles**

Device link profiles are most closely related to the output class of profiles. A device link profile combines two output profiles to provide the specific conversion instructions between two particular devices. It provides the opportunity to maintain black and other separation purity (i.e., what begins as black only in the source colour space emerges as black only in the destination colour space) by removing the need for passing the colour transformation through the PCS. To define a device link, we identify a source and destination profile to our colour management software, specify the rendering intent, and provide details on how constrained the re-separation should be. By avoiding the passage into and back out of the PCS, we can very strictly control the parameters of the colour conversion. The options for conversion are:

- Full re-separation — Complete re-separation. Solid colours in the original file may not remain solid. The black generation parameters that you specify are used, which may result in using less chromatic ink and more black ink.
- CMYK integrity — All colour builds can be adjusted. The relative amount of black versus CMY will be preserved in content processed through the device link.
- Black purity only — Any colours other than the black channel (solid K, K-greys) can be adjusted.
- Colour and black purity — The same as fully constrained, but solid colours can be reduced to a tint.
- Fully constrained — Any colour made with only one or two inks will not have other inks added. Solid (100% tints) primaries and secondaries are not affected and remain solid.
- Ink optimizing — A proprietary term in the ColorFlow colour management software for applying a full re-separation with a heavy grey component replacement (GCR) algorithm.

If we process an image from RGB to CMYK at the beginning of our production process, we gain the stability of having the image in our known CMYK space, but we surrender the flexibility of converting to the optimal CMYK space at final output. For final stage or late-binding conversion, we are dependent on the RIP environment for managing the calculations between the profile pair (see Section 5.2). A device link provides additional security in the conversion process by reducing the variability that can come with the processing application input that is part of a profile pair transformation.